

Herbarium paper -

BOTANICAL

EXEDITION

Report

Gardens 3326
22

From Whom

D. of S.

Place

S.

Date

21/4/22

SUBJECT.

B.S. 487
22

*Requests authority for
Her Honourable Magistrate to visit
Guns taken for collection*

Connected Papers.

MINUTES.

H.S.

Approved ?

Mr. E. E. F. Pelly

26-4-22

Approved

Mr. F. M. Baddeley

26-4-22

D. of S.

To note approval

Mr. E. E. F. Pelly

27-4-22

es.

Noted

and sent

Measures should also see this paper

Mr. H. B. Purkiss

28/4/22

No Minutes should be written on this page. A separate half-sheet to
be used if required.

DRAFT.

Fair Copy signed by

SIR,

~~I have~~ I have the honor
 to inform you that with your
~~approval~~ I propose to send
 Mr. Mohamed Hariff, Field
 Assistant short upon his
 annual collecting trip, and
 have selected for this
 year work the ~~area~~
 proper of Jempang Tabau, where
~~the~~ in consequence of
 the progress of the survey
 party good facilities for
 getting about exist. Mr.
 H. C. Robinson of the
 Museum, Kuala Lumpur
 has promised his assistance.
 2. It will be necessary

^{Mr. Hariff}
that he be accompanied
by a plant collector from
Singapore.

3. Your sanction is asked

for the charges of ~~the~~ expenses
against the Travelling Allowance
of the ~~Department~~ ^{of the} ~~Department~~

2

From Whom

Place

Date

SUBJECT:

R.S. 300
16

Requests permission to visit
Irenggam to collect botanical
material

Connected Papers.

MINUTES.

1. Letter to C.S. forwarded 16/4/25

No Minutes should be written on this page. A separate half-sheet to
be used if required.

Fair Copy signed by

20/5/25

To

SIR,

In reference to my letter of ^{in 88/1924} April 15th I have the honour to report my return this day from Kuala Trengganu.

~~I have left behind~~

~~It was able to make~~

2. I made various excursions through the region around Kuala Trengganu, and inspecting the plants in cultivation, taking specimens where necessary, and collecting also herbarium specimens of the native flora.

We have hitherto ~~no~~ ^{herbarium} specimens from the coastal region of Trengganu. In addition

I secured specimens of plants used medicinally.

3. ~~on the 10th inst. I went~~ ^{on the 10th inst. I went} ~~to make an excursion~~ to

Pulau Kapas, and there obtained living specimens of various orchids, and other herbarium material.

4. By the courtesy of the Commissioner of Lands I was able to ~~make~~ travel two days up the Trengganu river; otherwise my time was spent in the immediate neighbourhood of Kuala Trengganu.

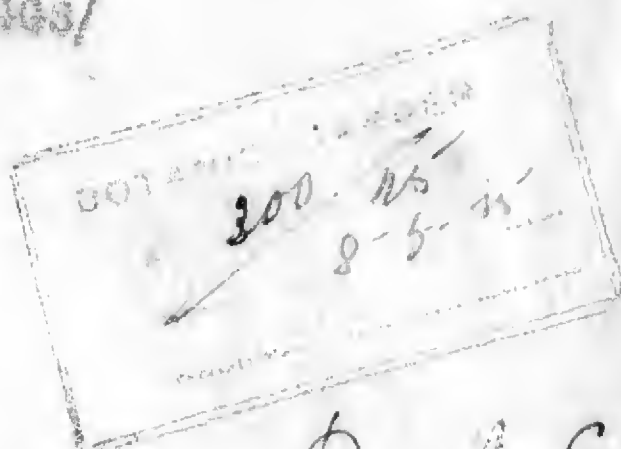
5. I have left Mohamed Hamid, the Tuto Asst:
from Senegal, and a plant collector, to ~~do what~~ ~~the next boat~~ do what further collecting
is possible; they will return on the next boat.

4/2

They
will.

COPY FOR.....D. of Gardens

GGG/



No. 88/1924.

H^K May

D. of Gardens

Forwarded for information.

6-5-11 2.5 refers

[Handwritten signature]
6/5/11

Sir,

Enclosure 1.

I am directed to forward herewith copy of a letter dated the 18th April, 1925, from Mr. Holttum, Acting Director of Gardens, Straits Settlements, and to request that he may be given any assistance he may require in the collection of botanical material.

I have the honour to be,

Sir,

Your obedient servant,

(Signed) W. GARTER

Colonial Secretary,
Straits Settlements.

The British Adviser,

TRINIDAD.

BOTANIC GARDENS, SINGAPORE,

STRAITS SETTLEMENTS,

15th April, 1925.

No. 300/25.

PROPOSES A VISIT TO K. TRENGGANU TO COLLECT
BOTANICAL MATERIAL.

Sir,

During last year Mr. Burkill spent a good deal of time in visiting various parts of Malaya in order to collect material and information for his proposed Dictionary of the Economic Products of the Peninsula (see Gardens 88/24). He did not have time to visit a few of the more outlying places, and it was part of his recommendation when he left Singapore that I should go to Trengganu to collect similar information for him.

2. It would appear most convenient for me to make the journey to Trengganu at an early date, and I have the honour to request your permission to leave Singapore either on the 29th instant or May 6th. It would be necessary to stay at K. Trengganu at least 8 days, the earliest dates reaching Singapore on return being May 11th and 18th respectively.

3. I do not know quite how much there will be to do when I get to Trengganu. It is possible that an additional week's stay would be necessary to do the work properly, and I must ask leave to decide the limits of my stay when I get there. There will further be scope for purely botanical collecting if time allows. In any case I wish to return to Singapore as soon as possible, as Mr. Henderson will be alone in charge here during my absence.

4. I propose to take with me Mr. Mohamed Haniff, the Field Assistant at Penang, who accompanied Mr. Burkill on his travels last year, and a plant collector.

5. Expenses will be covered by the Gardens vote for Travelling and Personal Allowances.

I have the honour to be,

Sir,

Your obedient servant,

SD. R. E. HOLTUM.

AG. Director of gardens.

The Honourable,
The Colonial Secretary,
SINGAPORE.

Fair Copy signed by

15/4/25-

To

SIR, Proposes a visit to K. Trengganu
~~for~~ to collect botanical material.

C.S.

1. ~~But~~ During last year Mr Burkill
~~was~~ spent a good deal of time
 in travelling & visiting various parts
 of ~~the~~ Malaya ~~Peninsula~~ in order to
 collect ^{material and} information for his
 proposed Dictionary of the Economic
 Products of the Peninsula. He
 did not ~~visit~~ have time to visit
 a few of the more outlying
 places, and he proposed that
 I should ~~go in future~~
 it was part of his recommendation
 for ~~the~~ ^{similar} when he left Singapore
 that I should go to Trengganu
 to collect information for him.

2. It would appear most convenient
 for me to make the journey to
 Trengganu at an early date, and
 I have the honour to request
 your permission to ~~make~~ leave
 Singapore either on the ~~29th~~ ^{29th} or May ~~1st~~ ^{1st}. It would be
 necessary to stay at K. Trengganu
 at least 8 days, the earliest
 date for return being reaching
 Singapore on return being May 11th
 & 18th respectively.

(See

Further
 There will be scope for ~~working~~
 botanical collecting if the time
 allows.

3. I do not know quite how
 much there will be to do
 when I get to Trengganu.
 It is possible that an
 additional week's stay
 would be necessary to
 do the work properly, and
 I must ask leave to decide
 the limits of my stay when
 I get there. In any case
 I wish to return to Singapore
 as soon as possible, as
 Mr Henderson will be alone
 in charge here during my
 absence.

Tover F20/8

4. I propose to take with me Mr Mohamed Haniff, the
Field Asst. at Penang, who accompanied Mr Burkill
on his travels last year, and a plant collector. ~~Mr Haniff~~
~~is due to ^{bring in} ~~visit~~ Singapore on my return in order to~~
~~act for Mr Best, Asst Curator, who is proceeding~~
~~on leave on the 22nd inst. Mr Tuckey, Field Asst. at~~
~~Singapore, will go to Penang.~~

5. The ~~Expenditure~~ ~~costs~~ will be covered by the Gardens
vote for travelling & incidental allowances.

Let

From Whom	
Place	
Date	
SUBJECT.	
<i>Siamese — Collections .</i>	


Connected Papers.

MINUTES.

No Minutes should be written on this page. A separate half-sheet to
be used if required.

No.	Local name	Botanical name
679	Ton maplap	<i>Oryza latifolia</i>
714		<i>Diospyros embryopteris</i>
666		<i>Emilia sonchifolia</i>
711		<i>Clerodendron nerifolium</i>
654		<i>Oxystelea esculentum</i>
706		<i>Oxystelea esculentum</i>
701		<i>Theselia nerifolia</i>
695		<i>Moschoma polytachyum</i>
688		<i>Nelsonia camptocarpa</i>
652		<i>Denis uliginosa</i>
699	Ton Lai	<i>Cajanus indicus</i>
733		<i>Pueraria thascoloides</i>
694		<i>Trianthema portuacastum</i>
698		<i>Cassia siamea</i>
722		<i>Artanema sesamoides</i>
674		<i>Brugneria caryophylloides</i>
691		<i>Brugneria caryophylloides</i>
688		<i>Brugneria gymnotriza</i> (approaching)
672		<i>Brugneria eriopetala</i> <i>B. eriopetala</i>
717		<i>Barringtonia acutangula</i>
730	Ton Saka	<i>Conbrethum near quadrangulare</i>
719		<i>Conbrethum</i> - Ridley 15469 -
734	Sanaw Thai	<i>Terminalia near citraria</i>
735	Sanaw Pipet	<i>Terminalia</i> sp. <i>liabata</i>
729	Pi Pali	<i>Uvaria rufa</i>
659		<i>Gossypium barbadense</i>
725		<i>Elaeocarpus</i> (not recorded as Siamese)
641		<i>Dumbria near fuma</i> & <i>D. Scortechinii</i>
681		<i>Cyelia peltata</i>
676		<i>Hypocarpus</i> ? n. sp.

no.	local name.	Botanical name.
669		<i>Pereskia Turbithum</i>
685		<i>Glochidion glomerulatum</i>
675	Ton Krabun	<i>Carapa obovata</i>
654	Ton Ngwah pamau	<i>Acenthus ebracteatus</i>
664		<i>Justicia Gendarussa</i>
680		<i>Paspalum scrobiculatum</i>
655		<i>Rhynchospora aurea</i>
684		<i>Hura brasiliensis</i>
709		<i>Glochidion littorale</i>
710	Ton Lambou	<i>Sonneratia acida</i>
661	Matuang	<i>Avicoria carambola</i>
662	Mapuk	<i>Garcinia dulcis</i>
664		<i>Thespesia papulosa</i>
686		<i>Eugenia jambolana</i>
693		<i>Peristhura foetida</i>
689	Ton Samair	<i>Avicennia alba</i>
708		<i>Vitis repens</i>
704		<i>Sceloporia himanthera</i>
674		<i>Excoecaria agalbeta</i>
673	Ton Lampen	<i>Sonneratia alba</i>
705		<i>Mikania scandens</i>
682		<i>Scoparia dulcis</i>
707		<i>Tagetes fragrans</i>
690		<i>Cerise Candolleana</i>
665		<i>Hygrophila quadrivalvis</i>
721		<i>Pinicum lugonense</i>
712		<i>Mercurea gigantea</i>
732		<i>Cracca Lagopodiodes</i>
715	Ton Takien	<i>Hopsea odorata</i>
692		<i>Securium portulacastrum</i>

no.	Local name	Botanical name.
713	Ton Kat kas	<i>Randia uncata</i> , Ridley.
700		<i>Commelina nudiflora</i>
728		<i>Croton caudatus</i>
723		<i>Croton caudatus</i>
720	Ton Klue	<i>Knema Luya</i>
702		<i>Solanum maroniense</i>
667		<i>Cinnamomum craticum</i>
658	Ga Koke	<i>Cyperus</i>
718		<i>Bambusa ? Rumphii</i>
678		<i>Apluda varia</i>
726		<i>Alsomitra</i>
703		<i>Pouzolzia</i>
656		<i>Pandanus group of P. Kaida</i>
724		<i>Ficus hispida</i>
653		<i>Ficus</i>
716		<i>Ficus ? Benjamina</i>
727		<i>Luccinaca</i>
677		<i>Fornia diaphylla</i>
721		<i>Mucuna</i>
684	Ton mapau	<i>? Palagium edule</i>
663		<i>Gynanethum ovalifolium</i>

Poh Yone Rd.

BANGKOK,

SIAM.

438/22
10-2-22

March 31st. 1922.

R. Burkill Esq.
Director,
The Botanic Gardens,
Singapore

Dear Sir,

I am wondering
whether your Herbarium
staff would determine
collections of Siamese plants.
In the past I have always
sent to Kew — or direct to
Professor Craib, but they are

amateur botanists in the
country.

Whilst I am writing you
I should like to ask you
about *Mitragyna speciosa*
& *M. diversifolia*, which no
doubt occur in Malaya as they
do in S. Siam. The leaves are
used as a substitute for
opium largely with us in
the South, & I was wondering
whether you had come across
the drug, & whether you thought
it is a source of danger.

You may have noticed that
2 new alkaloids have been

found in it, & I have
promised Professor Dyer
further supplies of the leaf
for more complete investigation.

Yours faithfully,

A. Mearns

so slow as to make it
impossible from a practical
point of view. It may be you
have enough material for
the purpose. Would you
also describe new species?
Most of my collecting is in
the Bangkok district, but
I occasionally get a trip
up country when I am
almost certain to get something
new. In fact I got a
new *Radermachera* in
Bangkok about a year ago.
Mrs. Smith tells me you are
determining her ferns, &
I should like to mention
there is no chance of being
inundated with collections
from Siam as Mrs. Smith
& myself are the only two

780

25
29/10/23

Pok Yome Rd.

Bangkok, Siam.

October 6th. 1923.

Dear Mr. Burkell,

I am writing to trouble you re
a couple of determinations you were kind
enough to give me: —

no. 681. your list dated 15th August 1922.

Cyclea peltata.

The petals & sepals seem to be free. Is there
any chance of it being a *Stephania*,
perhaps *S. hernandifolia*?

no. 676. Also in your list of 15.8.22.

Hypserpa. ? new sp.

My no. 597 was determined by Kew as
Cocculus sarmentosus, Diels, & it
appears to be identical with no. 676.

Also, unfortunately the prospect of a
new species will disappear.

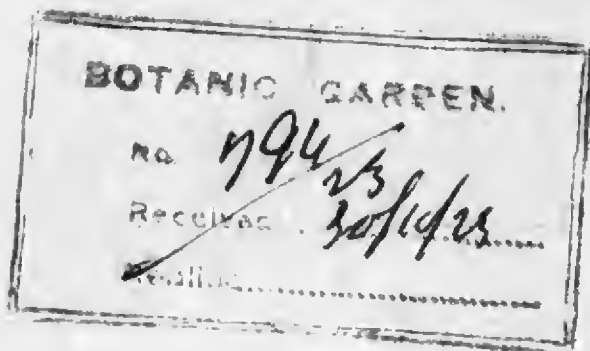
Should you have an opportunity
I should be very grateful to hear
from you on the matter, though no doubt
you will be very busy after your return
from leave.

Yours very truly,

A. Marcan.

P70

PS When I sent you no. 676 I had
quite forgotten I had sent - 597 to Kew;
I received their determination after
yours. I had no intention of sending
the same plant to two authorities,
of course.



Poh Yome Road,
Bangkok, Siam.
July 25th. 1923.

Dear Mr. Burckell,

I was very pleased to receive your list of determination, dated June 16th. 1923. It is very good of you to have taken the trouble to look them up at Kew.

It is interesting to note that nos. 1000 (*Heliotropium* sp.), 1004 (*Vitex* sp.) & 1002 (*Phyllanthus* sp.) are undescribed.

To show that the flora of the paddy field districts is still imperfectly known, which surprises me. I wonder if you are going to describe them. If so, perhaps you would consider the Natural History Society of Siam for the purpose?

There must be some error in no. 998 "*Ficus* sp.". No 998 is described as *Trichosanthes cucumerina* in the same list, & the second 998 must be an error. Perhaps I gave you the wrong number, but I cannot trace it.

I am very interested in my no. 688, (dated 15th August 1922) determined in your list as *Bruguiera gymnorhiza*, approaching *B. crispata*.

Do you think there is any chance of it being a hybrid? I spent a long time on it myself, & could not determine it. I suppose a new, a new variety of *Gymnorhiza* would be of considerable interest, as I always understood this genus was so familiar. The mangrove swamps are the only "jungle" we have near Bangkok. I can send you the points I noticed whilst dissecting this no. 688 if it is of any interest to you.

I have got a new *Bauhinia* from the South which Craib will eventually describe.

With renewed thanks,

Sincerely yours

A. M. Maclean.

P.S. 29. 7. 1923.

Encouraged by your reports of the 3 above spp. I took a trip yesterday to the district they came from, but can hardly expect to see such good fortunes a second time - at the same time of year, alas.

DRAFT.

Fair Copy signed by

To

Dear

SIR,

A. M. C. C. T.
 P. O. Box Road.
 B. C. C. C.
 S. C. C.

In answer to your letter
 of March 31st 1922, I think
 it may be possible to name
 plant for you in this way.

As you collect, collect
 the duplicate and number:
~~and~~ the duplicate specimen
 I have found, and we
 will try to return the
 names within say six weeks
 if we cannot we will
 return the specimens.

When I go on leave next
 year difficulties may arise.

As to Mitragyna speciosa
 I fear I am not in possession
 of any new knowledge

From Whom	J. of P.
Place	S.
Date	2-1-24

SUBJECT.

Suggests
Requests permission that he may
tour the towns of the Municipality
during 1924 to collect information for the
Dictionary of the Economic Products of
the Malay Peninsula

B.S. 1
24

Connected Papers.

MINUTES.

1. Letter to C.S. forwarded 2/1/24
2. Letter from C.S. 24-1-24

No Minutes should be written on this page. A separate half-sheet to
be used if required.

24th. December, 1924

REPORTING RETURN FROM TOUR.

Sir,

I have the honour to inform you that I returned to Singapore from Penang, last night. (Gardens 88/24)

2. The Waterfall Gardens are in good condition, and the affairs of them in order. The Committee for their Management met, and transacted business as usual.

3. I paid a visit to the Hill top to inspect the Bel Retiro garden, and am in correspondence with the Hon^{ble} the Resident Councillor regarding it. He is not satisfied nor am I in regard to the gardening there; so that we shall recommend to you that the Assistant Curator in executive charge of the Waterfall Gardens be given more control. At present he advises only. You may expect to receive a communication, therefore, upon the gardens from Mr. Voules.

I have the honour to be, Sir,

Your obedient servant,



Director of Gardens, S.S.

The Honourable

the Colonial Secretary,

Singapore

DRAFT.

Fair Copy signed by

To C.S.

I have the honor to report to my
Whom from the last San Francisco
No. 88/201 My letter No. 133/21
dated the 13th February 1924
2. On leaving Singapore (No. 424)

I proceeded to Taipei, and to Maxwell
with these interesting and passed a
few days collecting and examining the
with pleasure; but my wife became
sick and I was forced to that I might
have to leave her back in Singapore, and
I have telegraphed to you for help
which you promise.

I stayed at Maxwell till the day: on my
at Maxwell till the day: on my

2. The collections from the
about 450 members, and from the
printing of the paper of the
demonstrations of interest

3. I took the opportunity
to discuss the matter with
writing Mr. R. H. Anderson
the President of the
and the Board of the

[illegible]

DRAFT.

(G 17)

Fair Copy signed by

To

That for evidence concerning my time.
5. From Alor Star I returned to
Kang for a meeting of the Waterfall
Faction Committee on March 21st
and left Kang again on the same
day for Tarapur.

6. In Tarapur I examined the museum
from end to end for economic information
left by the Malay. I was allowed
by the Secretariat the use of the
manuscript reports on the Gardens
and I made some examination of
rattans conjointly with Mr. Samard,
Deputy Conservator of Forests. I also
was able to arrange that Mr.
Mc Gill and a merchant of Tarapur

will assist L. Plumptre his Malay
staff in getting into touch with
local brokers; and him to return to
Tarapur (subject to your approval)
after visiting Alor Star.

7. Bagoas examined through Plumptre
for products
and these have been those of



(S 99)

(2)

M. T.

Colonial Secretary's Office,

Singapore, 24 January, 1924.

It is requested that the following number be quoted in the reply to this letter.

No. 88/1924.

SIR,

I AM directed by ~~the Governor~~ to transmit to you for your information a copy of the document noted below.

2. Your correspondence I/24 refers.

I have the honour to be,

Sir,

Your obedient Servant,

Colonial Secretary,
Straits Settlements.

To The Director of Gardens,
Straits Settlements,
SINGAPORE.

DATE.	DESCRIPTION OF DOCUMENT.
21st January, 1924.	Letter from the Under Secretary to Government, Federated Malay States, Kuala Lumpur.

In Telok Anson I heard of 8 dye plants, used ~~in~~ the
Kampungs, ~~but in a~~ domestic non-commercial way. I had ~~no~~
time to follow up the information, which meant going into
the Kampungs. But Mr. Hariff will do that and also
get what ^{information} he can from brokers regarding their herbs.
Mr. Clayton tells me that pine apple fibre is of some little
importance apart from Telok Anson, and ~~for~~ therefore I am sending
to him ^{from his father} 2 dozens of that fibre which gives the largest fibre, though
poor fruit.

In Tanjong Malim I was put up with ~~no~~ ^{two} brokers, who
afforded me not a little information.

4. ~~Now~~ I obtained an able, but only in odd times, and as
June in Perak seems largely a month of scarcity of flowers.
~~Small very small collections that had no great commercial~~
~~value.~~ I also brought back, ^{being} plants for these gardens
and sent others of the hands of Mr. Hariff & Phang.
5. Mr. Hariff and the cook who was with us,
will reach Penang today.

Hariff

I have the honour to report to you my return from this day from the tour sanctioned in your

with transferring plants to the newly completed house no 11

Much work is in hand there, connected with the establishment of the clearing & the building of the house in satisfactory manner

2. The first week of my tour was occupied by the affairs of the water fall garden. During the Committee for the management having met on June 13th, I left Manang on June 14th and visited successively Kuala Kangsar, Grik, Ipoh, Batu Pahat, Tapah, Telok Anson and Kajang. Completing all the search for minor economic products that I expect to be able to make personally, but leaving certain investigations to be completed by Mr. Mohammed Saif, who with your sanction will return in the end of this month to Kuala Kangsar, Batu Pahat, Tapah and Telok Anson.

3. My search for minor dyss had small results. I was disappointed. 3. At Kuala Kangsar, Mr. R. Cretton, the District Officer called on me and they promised help, but my ~~proposals~~ ^{said, as is natural, that he would} ~~rather~~ ^{take} some days in collecting the herbs, and on that I ~~could not afford~~ ^{was} ~~to~~ ^{arranged} with them, ~~the~~ ^{lacking} the time myself, that Mr. Saif should visit them later getting him each in turn what he has to tell. I found no indigenous dyss in use, nor tanning practiced, nor unusual fibres. At Grik where the Assistant District Officer & the people were of great use to me, six bundles brought no less than 200 samples of herbs to me. At Ipoh I was able to look through the stock of a Chinese herbalist.

By Mr. Bayly's kindness I discovered at Kelantan some establishments where I shall be able to make contact with Dr. J. S. Gieseler's work: and by Dr. Ferguson's kindness I have promise of help from botanical

Dr. (Miss) Ferguson

on the suggestion of Mr. Campbell of the Agricultural Dept.
and at Batu Pajah I have obtained a considerable amount of
information from an exceedingly knowledgeable assistant
named Ng Ah Chong, who while dispensing Chinese
medicine knows well ^{to what degree} ~~that~~ he can replenish his
stock locally. He will still continue ~~to help me~~
~~for which purpose Mr. Hariff~~ I thought it will
be to take from him at a cost of 1-2 cents each
samples of all the drugs which he stocks, and
while he ~~has~~ ^{has} furnished about one half ^{of them}, he promises the
other half later. For it Mr. Hariff will go to
Batu Pajah later. Two months called in at
Batu Pajah supplied me a variety of information
and at Tapah ~~it was~~ the same was the case.

Tapah is the centre near to which Ceruti lived
amongst Sakais, and ~~his book~~ the Sakai plant-
names of his book "My friends the Savages", were
picked up there. To determine what the
plants are I have arranged that Mr. Hariff
of the kindness of Mr. Taylor & Mr. Spelbrink
of the Forest Department, that Mr. Hariff shall
~~be~~ be put into touch with those who have
intimate dealings with the Sakais at Jor, and
by securing his list, provided with my list
of determinanda for Ceruti's book, I hope for
results later. I may insert here the
information that I have ^{established} ~~found~~ a common
line of action ~~course~~ with Father Ichevesta, missionary
among the Sakais near Temengoh in Upper
Perak for the determining of the plants used
there.

CAP

5 in G. 148/1924.

21 January, 1924.

Sir,

I am directed to acknowledge the receipt of your letter No. 88/24 dated the 14th January, 1924, and to inform you that all possible assistance will be rendered to Mr. Burkill, Director of Gardens, during his proposed tour through the Federated Malay States in order to collect information for the Dictionary of Economic Products of the Malay Peninsula.

I have the honour to be,

Sir,

Your obedient servant,

Under Secretary to Government,
Federated Malay States.

The Under Secretary, S.S.

Singapore.

It is requested that the following number be quoted in the reply to this letter.

No. I/24



Botanic Gardens, Singapore,
STRAITS SETTLEMENTS.

2nd. January, 1924.

SUGGESTS THAT HE MAY TOUR THROUGH THE TOWNS
OF THE PENINSULA DURING THE YEAR
IN ORDER TO COLLECT INFORMATION
FOR THE DICTIONARY OF THE
ECONOMIC PRODUCTS OF
THE MALAY PENINSULA

Sir,

I have the honour to submit that I hope during this year to tour through the towns of the Peninsula in order to collect information for my Dictionary of our Economic Products, and to suggest that it would be a great service if help could be asked from District Offices outside the Settlements.

2. The request could embody this information. "It is intended to prepare officially a dictionary of the Economic products of the Malay Peninsula. With the purpose of rendering it as complete as possible, Mr. Burkill will tour through the country during 1924 enquiring ⁱⁿ all the towns for the more obscure products. He wishes to visit the shops or workshops of artisans who dye, tan, weave etc. and learning their materials to trace them to their origins: to get into touch with native drug collectors and to ascertain what they use: to visit markets and seek out ^{un}usual vegetables or other food ~~products~~ stuffs: etc. It will be understood that the search can be shortened ~~by~~ the kind direction of the District officers and Mr. Burkill will call on each officer as ^a preliminary. It is asked that the officers will be so good as to collect together such such information within their own knowledge and from their staff, of the places, houses and persons who should be visited by him. It is evident that the knowledge which Mr. Burkill seeks

must in many cases be paid for: and this can be done by purchase of goods, e.g. if a collection of drugs or of samples of dyed cloth: by which means it is intended to avoid putting artisans and others to trouble for which they get no recompense".

3. You will observe that it is the help of ^{the} Governments of the Federated Malay States and the Unfederated States which is desired.

4. The procedure which I propose is exactly that which I carried out, and I think with success, during my service under the Government of India.

5. As to the jungle man I do not know if the District Officers have any sure way of reaching him, as is desirable in a measure. They are for instance numerous vernacular names in Cerruti's account of the Sakais, which remain "nomina nuda": and though I expect to be able to do something with the help of the Conservator of Forests, help if possible from district ^{officer} offices would be valuable.

I have the honour to be,

Sir,

Your obedient Servant,

W. I. H. Burhill

Director of Gardens

The Honourable the
Colonial Secretary
Singapore

From Whom	
Place	
Date	
SUBJECT.	
<p><i>Collections from Sarawak per Dr. Freunthly.</i></p>	

Connected Papers.

MINUTES.

*In conversation I have suggested paying
per specimen, that we may reimburse Dr.
Dr. Freunthly a part of his expenditure.*

27.6.24 *Ans*

No Minutes should be written on this page. A separate half-sheet to
be used if required.

2 in F.R.O. 241/23.

28-11-23.



Director of Gardens,
SINGAPORE.

I enclose herewith a copy of the letter which I sent to Moulton concerning what I hoped to accomplish with the work of the collector, who is now here undergoing training.

F. W. Foxworthy

Forest Research Officer, F. M. S.

COPY.

1 in F.R.O. 241/23.

Office of Forest Research Officer,
F.M.S

Kuala Lumpur 18th. October 1923.

Sir,

You have been so kind as to arrange for me to obtain the services of a plant collector in Sarawak and I am writing this formal letter to place on file my desires concerning his work for the present and something about the possible developments from this work.

2. Arrangements to be made with the collector.-
I will pay the man you have selected \$30/- per month and all necessary expenses, and will supply paper, field note books, labels, and other material needed for his work. I estimate that the total expense to me will not be more than \$100/ per month, and I propose, in the first instance that the arrangement should continue for one year, if satisfactory to both parties. I should like to have him come over to the F.M.S. for one month's training with the Forest Department collectors. It would be convenient to have him here from the 10th. of November, and I would suggest that he leave Kuching by whatever boat will bring him here about that time. His pay will begin from the time he leaves Kuching, and I include herewith a postal money order for \$100/- so that his passage can be paid and he can have such advance as seems desirable.

Major J.C. Moulton, O.B.E.,
Kuching, Sarawak.

3. Collections desired. - The things which I particularly want to get are the following.-

(a). All members of the family Dipterocarpaceae that are found in flower or in fruit. - A number of forms from the eastern and southern parts of the Malay Peninsula are evidently very closely related to Sarawak forms and, in some cases, I will be unable to identify them without comparison with Sarawak material. I am also gradually assembling material for a monograph of the group, which I hope some day to finish. A number of duplicates and also a wood sample will be wanted with each number collected.

(b) Commercial Timber Trees.- All trees that are recognized as of commercial importance are of interest to me and I want flowering and fruiting material and wood specimens.

(c) Other economic plants. - Any plant which has now, or is likely to have in the near future, economic importance is of interest to me and should be collected.

(d) Localities for collecting.

I am finding in the Malay Peninsula, that it is very important to have collections from all districts. I would like for the collector to work in each of the districts of Sarawak. It will be possible to furnish him with a list of known names, and he can look for the same trees in each district visited. On a particular trip, he may find only a few of the things in flower or fruit, but he can locate particular trees for examination on subsequent visits and can do general collecting. It is proposed that his trips shall be directed only to the lowland forests. The altitudinal range will be determined by the place at which the Dipterocarps cease to occur.

4. Disposal of collections. - I propose to have the first set of material for study here. The first set of duplicates will be available for use in Sarawak. If some one can be found who will be willing to exercise a little supervision over the collector's work, this set can be taken out before the material is shipped to me. I have thought of asking Mead to exercise a little supervision over the field work of the collector, as Mead knows the forest conditions in ^{the} Malay Peninsula and would be able to learn where and when special trees are flowering or fruiting. The selection of the specimens for the Sarawak collection might, I should think, be done at the Museum. The second set of duplicates will go to the Botanic Gardens at Singapore and I have thought of asking Burkill to help with the identifications and to see to the further distribution of sets. It is hoped that there will be a set for Kew, one for Buitenzorg, and one for Manila.

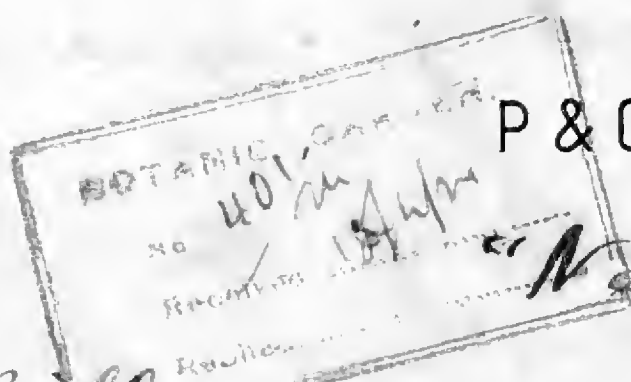
5. Future development of this work.

If this work goes on as I should like it to it will soon become too big for me to handle, and I will then suggest to your Government the desirability of taking it over, perhaps with outside contributions toward the expense. If the special collecting is well done, it would seem decidedly worth while to get general collections at the same time.

I have etc

SD. F.W.FOXWORTHY
Forest Research Officer,
F.M.S

Collection of
Kilantam



P & O. S. N. Co.

S.S.

Nellore;

Dear Burkhill:

Your letter of April 23.
was received just before I sailed.

I did not think that Mohammed
Nur reached a height of as much
as 2,000 feet at any time on
the trip. Jungny Sitong is given
on our maps as a little less
than 5,000 feet in height, and
it is doubtful if Nur reached
the main mountain at all.
From what he told me, I should think
it very doubtful if he got much,
if any, above 1,000 feet in the
Sitong neighbourhood. It would not
surprise me for plants usually found
at a higher elevation to come
rather low there. It is quite a large
mountain mass, with a lot of
steep and narrow ridges, and,
(p. t. o.)

probably, a good deal of the same kind of exposure is found on the tops of steep ridges as on the summit of the mountain,

This boat is not crowded and the food is good. It promises to be a rather comfortable trip,

We expect to get into Colombo on May 1 and London May 23.

Thanking you for your good wishes and with best regards, I am,

Sincerely yours,

F. W. Foxworthy

15th. April, 1924

My dear Tansley,

I have tried to answer your letter of January 9th., by the enclosed note. It is a very compressed account of my position here, and I have to acknowledge Holttum's assistance in preparing the statistics of the lower plants. At the same time the note embodies the views which direct my policy. I should like to know what you meditate doing with it, as parts of it would be serviceable to me in print should I thereby reach our rulers here. I am in touch at last with more sympathetic people than at any time during the last difficult ten years.

I have not made in the note a special point of one matter interesting me, the matter on which I wrote to Brooks last year. It is the introduction into the teaching of systematic botany of some economic information. If for instance Coffee were put before the student learning Rubiaceae, he would lose nothing. It represents the order far better than Mentas or other genera likely to be used as being convenient. And if a little of the history of cultivated plants were poured into the ears of the students the human interest would insure the sticking of some of it.

Sincerely yours, and with best wishes for your
success,

15th. April 1924

My dear Chipp,

The enclosed is a carbon copy of a note that I have sent to Tansley on a request from him that you and he had joined forces to discuss a survey of the Empire. You will find that I have written to him with it.

My note will probably be more understandable to you than to him. I have asked him what he is going to do with it, as parts of it might be useful propaganda here.

With the departure of James, the horizon is clearing. Hose and Maxwell are talking in friendly terms of the transfer of Anderson forthwith to my department; and we are all getting ready to settle the question of the ultimate removal of the centre of this Department to K.-L., when the Public Gardens there will become Botanic Gardens. I expect that some such year as 1826 will see the fact accomplished.

I have asked Hose to interest himself in the matter of my successor. But new to his work he must be rather overwhelmed with matters demanding attention at present.

My wife is much better. She has had an X-ray examination and the cause of her trouble is clear. She will have to go slow: no tennis; but the doctors say that it is not necessary for her to go home. Our best salaams

Sincerely yours

The largest purpose at the present time of Systematic Botany is the creation of a common language whereby one man may communicate with another upon the subject of plants: and for this reason Systematic Botany demands attention before any other branch of the Science, and will be spoken of in this note first.

In ~~the~~ course of publication by the Governments of the Straits Settlements and the Federated Malay States jointly ~~there~~ is a Phanerogamic Flora of the Malay Peninsula from the 7th degree north southwards to Singapore. It is being prepared by Mr. ^{H.N.} Ridley in London and ~~has the large purpose~~ ^{is intended} for putting the knowledge that Europe has accumulated into the hands of the botanist in the Peninsula. It is in fact a revolutionary movement, a part of ~~the~~ ^{a line} of action by which the two Governments named are taking over the working out of ~~their~~ ~~the~~ scientific position ^{of the Peninsula}.

In this Flora Mr. Ridley is expected to describe 9000 Phanerogams. Recent exploration suggests that the Peninsula holds 15-20 per cent more which have not yet been described, and therefore in its area of about 52000 square miles, there are found 10350 to 10300 species. For a moment a few comparisons may be instituted.

It appears that 9000 is approximately the number which will be enumerated ^{in a catalogue now appearing of species} by Mr. E.D. Merrill ~~of~~ known from the Philippine Islands, the area of which is twice that of the Peninsula. ^{Should} ~~the~~ the density of species in the two ^{be considered probably} ~~is~~ similar, the Peninsula appears by much the better worked. But Java with an area very nearly equal to that of the Peninsula, and certainly better worked, carries only 5000 Phanerogams: but then the vegetation of the low country of Java has suffered such enormous interference from man. Borneo with an area of 50,000 square miles is known to carry 5000 Phanerogams; but it is certainly not more than 60 per cent worked. The rest of Malaysia is less, one may say little, worked.

Of ~~XXXX~~ Pteridophytes about 540 are known to occur in the Malay Peninsula; and this figure represents perhaps 20 per cent of the total.

Of Bryophytes, a Moss list will shortly be published by Mr. H.N. Dixon, and will run to about 300 species. As the Moss-flora of Java is known to contain about 320 species, much certainly remains to be added to the Malayan list. Liverworts are very little known.

Cryptogams lower on the scale than these certainly do not number less than the Phanerogams, and may reasonably be estimated as more than twice as many. In Major ^{T.F.} Cripp's list of the known Fungi ~~and ~~XXXXXX~~ Phanerogams~~ 350 are enumerated, and subsequent additions increase the number to 500. It is not possible to estimate what percentage of the whole fungal flora ~~this~~ ^{it} may be. Of those known two thirds are Basidiomycetes, and over 300 belong to the Polyporaceae. Phycomycetes on the other hand have scarcely been touched.

The accompanying map indicates the degree of exploration of the different parts of the Peninsula: the figures on it are estimates of the ^{percentage of the} probable total flora (Phanerogams only) which for each square have been collected, ~~are~~ ^{are} in Herbaria or recorded in print. It is clearly seen upon the Map that the three Settlements ~~are~~ ^{are best worked} first. ~~Each square on the~~

~~map is~~ ^{each being} of about 1200 square miles.

The square containing ~~XXXXXX~~

Penang ^{handy}	a probable flora of 2000	has 93 % known
Singapore	2000	96
Malacca	2000	35
Taiping and Gunong Babo	3000	60
the south end of the Main chain	2500	25
Gunong Tanan	4000	20
Gunong Kerbau and the Ipon valley	4000	20
the main range over, and with Kampar	3500	20
do do Kuala Kubu	3500	20
do do Kuala Lumpur	3500	20
the country south of Gunong Tanan	2500	20
southern Kedah with Kedah peak	3000	20
Lankawi islands	3500	20
the country north of Gunong Tanan	3000	15
south-central Johor	2500	15
Lowland creek with the Dindings	2000	15

English Miles



Singapore (on enlarged scale)

BOMBAY: 8 HORNBY F. AD. CALCUTTA: 303 BOWBAZAR STREET.
LONDON AND NEW YORK.

Price 4 cents.

Coloured Map, same size, Price 8 cents.

Memory Map, Price 2 cents.

There are 40 further squares ~~XXXXXXXX~~ carrying figures of 10 per cent and less.

It is not intended to suggest that work should forthwith be directed to completing the knowledge of each square; but to indicate diagrammatically where knowledge is scanty. These same figures show that the fascination of the mountains has led to their getting attention next after the Straits Settlements: ^{for instance} By the labours of the missionary Scortechini, of Sir George King's collector Kunstler, and of Wray, an officer of the Perak Museum, our knowledge of the Taiping hills is not meagre. An early paper will review it. Another early paper will draw into one view what is known of the vegetation of the uppermost two-thousand feet of Guning Tanan, the highest of the mountains of the Peninsula: but unfortunately the collections brought thence ~~there~~ ^{appear} somewhat of the nature of selections.

By knowledge such as the above map represents, official field collecting is ^{being} directed.

The material collected passes into the Singapore Herbarium, and much again passes out by way of exchange with institutions able and willing to supply what the Singapore Herbarium needs, i.e. comparable material from adjoining countries — material helping in the maintenance of a common nomenclature of species. The ~~XXXXXXXX~~ annual despatch is now of about 3000 specimens.

The Singapore Herbarium is part and parcel of the Botanic Gardens of the Settlement, not by accident, but by ~~XXXXXXXX~~ ^{intention} the nature of the work in both.

Botanic Gardens of the British colonial type are several sided, but mainly educational. An educational ~~XXXXXX~~ institution needs to be in a centre of population, and also popular: and to touch the human interest an economic element is appropriate ~~XXXXXXXX~~ ^{running through} the lesson in plants that they are intended to give

The systematic results of the Herbarium are laid before the Public in the Garden, and the Garden furnishes the interpretation to many a puzzle arising in the Herbarium. It seems to the writer ~~XXXXX~~ beyond dispute that Herbaria and Gardens should always be in the closest contact, and under the same administration, an observation which brings the ~~discusses~~ *discusses* matters ~~here discussed~~ to the range of the work of Botanic Gardens, and ~~to~~ ^{hence} to the range of interest in the administration *Maurits*.

British Botanic Gardens are several sided; but mainly educational. As educational institutions, their place is in towns, and to be effective they must be popular. The more they touch the human interest, the more they educate: and for that reason an economic element is appropriate to them. It is clear then that the ^{Maurits} Colonial ~~botanist~~ ^{Gardens} ~~XXX~~ needs ^{to possess after} ~~with~~ ^{They} ~~the~~ ^{also} systematic training, a ~~XXXXXX~~ ^{broad outlook} towards economic work, ~~the~~ ^{also} of course, that knowledge of the physical requirements of plants by which they can understand the way to make them flourish. On the other hand there are Colonial Agricultural Botanists whose services are devoted to Phyto-pathology and to the improvement of crops, and ~~these~~ whose training in its last courses should be in ~~all~~ the laboratory technique of Petri dishes and culture-media, or in genetics. Clearly there is a cleavage here; and Governments are likely to continue, as they do at present, to recognise the line, so that it will be possible for institutes which train ~~expert~~ botanists to plan two courses, the one comprising studies for Gardens service, and the other comprising studies for Agricultural service.

In the Straits Settlements there are two Gardens under one directorate, and it is contemplated to add a third in the Federated Malay States. Surely all will be under one head, with a central herbarium.

It is clear that in the Malay Peninsula the coming systematic botanist must also be an ecologist.

Towards ecology we have so far done little: we have ac-

quired in the Forest service, some preliminary skill in maintaining mangrove forests productive, that is to say in reconstructing the climax of the formation out of a serene-state induced by working; and we have ^{much} one count of secondary forest at fifty years of age. ^{but} The grand virgin forest of the peninsula is yet unstudied; and seeing that revenue is involved in its maintenance, the Government's will recognise ^{certainly} ~~clearly~~ that the study of it is a State affair. It is recommended that in future the candidates for gardens service should have had ecological training.

Malaysia carries a wonderful flora. It is the most intense Rain-forest flora of the Old World, and therefore to the Phytogeographer of absorbing interest. How it evolved is a much debated and unsettled problem, interesting the geographer, the geologist, ~~xxx~~ the zoologist and the botanist alike. In many ~~xxx~~ directions of recent years much has been done towards its ~~xxxxxxxx~~ explanation, and the botanist is not ~~xxxxxxxx~~ ^{really} backward. The biology of these forests is also absorbing ^{by interesting evolution} the inter-relations of plants and animals, ^{and} the dominance of ants in the plains ^{with} ~~and its~~ consequences, so unlike anything possible of experience in Europe, ^{For evolutionists} the rapid growth ^{in the rainy climate} ~~opens~~ ^{to revision} ~~the~~ ~~question of a series of~~ current ideas of the rate of evolution. These and numerous like ~~problems~~ ^{problems} are too academic to be recognised as legitimate charges on state revenues; but a colonial botanist equipped for their study will find ^{interest and} employment for his mind in all the leisure that his work permits, and will not ~~lose~~ ^{use} ~~his~~ ^{his} training let him incline towards work at them.

Grantchester,
Cambridge
9 Jan. 1924.

130. m
12/2/24

My dear Burkill,

I understand that you will not be able to attend the Imperial Conference next July. We are having a day to devote to a consideration of Botanical Survey of different parts of the Empire. Steff and Chapple (the Assistant Director at Kew) want to put forward a scheme for publishing a summary of what has been done, and intend suggesting a means by which future work can be made available in some sort of uniform shape. The need of training field officers and the like so that they may be able to understand the vegetation of the regions to which they go will also be discussed. We want if possible to give the Conference some kind of outline of what has been done. We originally thought of a series of papers on the different regions. But this will be impracticable on account of limits of time, and of the ~~scattered~~ widely scattered regions belonging to the British Empire.

It would be very useful if you could let me have a short summary of what has been done in the Malay region. I suggest the following heads. (1) Surveys of every kind. floristic, ecological (vegetational) or agricultural that have already been carried out. (2) What most ^{at home} wants doing in the future. (3) the kind of training, ^{at home} best fitted to enable men to tackle such work.

In default of any thing like a complete series of papers, I am trying to get information of this sort from the larger regions, so as to present some kind of summary to the Conference; and I shall be very grateful if you can help. Of course nothing more than an outline is required.

With best new-year wishes & kindest regards to you & Holthorn.

Yours very sincerely

AG Tansley.

DRAFT.

16 17

Fair Copy signed by

To

F.G. Smith

Dear Sir,

The box of plants from former
Huba arrived in good condition
and the following are an determination
The *Dracopis* may be a new
species will be studied & ascertained
this.

My best thanks for your kindness
Yours faithfully
J.S.

Specimens from top of g. Bubu,
K. Kangsar, Perak. All
~~flowering~~ trees or bushes about
10-15 ft. high, except one plant.

from E. A. Strouts, Asst. Conservator
of Forests, Kuala Kangsar.
coll^d 7.11.24. W. Strouts.

22143

Gumong. Buba.

coll E.A. Strick

Weinmannia Blumei.

Leptospermum flavescens

Luederickia Clarkei

Vaccinium bancanum

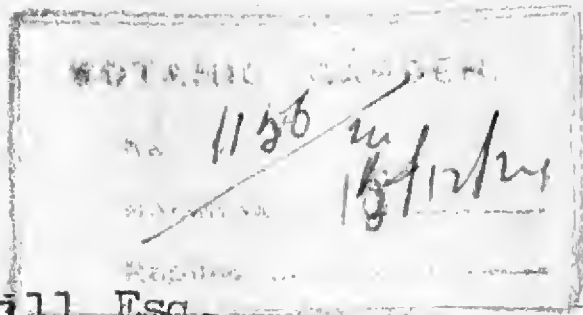
Diplycosia microphylla

Rhododendron malayanum

Symplocos adenophylla

Dacrydium Beccarii

Dianella sp.



12th December, 1924,
Kuala Kangsar.

To,
Gunong Bubu
I. F. Burkhill Esq.

Director of Gardens, Straits Settlements, Singapore.

Dear Mr Burkhill,

With regard to a parcel of specimens I sent to you the other day (from Gunong Bubu), ~~which~~ Mr Bazel has asked me to note, what I could, of the flora seen at the summit. I must apologise for the crudeness of my remarks, not being an efficient botanist myself. The summit of Gunong Bubu is 5434 feet high. We climbed up one of the Eastern ridges of Gunong Bubu. The ridge was fairly steep, & for the last 500 feet it was steep. High forest continued to within approximately 500 - 800 feet of the top, but the larger trees had thinned out at about 900 feet from the top. A species of Oak continued to very near the end of the high forest. The growth gradually became more thicket-like, with small trees 10 to 15 feet high & a dense undergrowth, through which it was difficult to pass. This was the condition at the summit, and the change was gradual for the last 500 feet. The summit was about an acre in extent; the other peak, about $\frac{1}{4}$ mile away, was not climbed. The specimens sent were taken from the bushes at the top, & one white flower from an orchid I think. Pitcher plants were very common. The undergrowth was chiefly composed of Resam with some Mattonia, & a thick grass-like plant with a stout stem formed of the adhering leaf-bases. Mosses began to appear at 500 feet from the top & became ^{more} thicker towards the top.

The summit of Gunong Bubu is ^{generally} ~~gradually~~ wreathed in clouds. The clearest months of the year are said to February & March.

Yours sincerely,

W. S. S. S.

From Whom	
Place	
Date	

SUBJECT.

OTARIO GARDEN.
No. 903/21
Received 23-7-21
Replied.....

*For Permission for a Plant Collector
to accompany Dr. Huxworthy for collecting
purposes in Australia*

Connected Papers.

MINUTES.

Dear Billy

How ~~many~~ ^{many} days
need allowance for
Mohd. bus for travelling to
Medan & back. (2 days?)

over
2 days
BT

J. E. Wong
26/8.

4/CCJ

905/21
22nd. July, 1921

FOR PERMISSION TO SEND A PLANT COLLECTOR TO SUMATRA
WITH DR. F.E. FOXWORTHY.

Sir,

Informing you that Dr. Foxworthy, Forest Research Officer, Kuala Lumpur, is proceeding to Sumatra for a fortnight's holiday, I have the honour to ask that I may be allowed to send a plant collector with him that he may collect plants for me. The cost will be small and can be met from my vote. The gain will be great, inasmuch as no one could better direct the collector than Dr. Foxworthy.

You will understand that the material collected has a considerable comparative value for the study of our forest trees, and that the chance of getting the guidance of such as Dr. Foxworthy is unusually favourable.

I have the honour to be, Sir,

Your obedient servant,

Jay

Director of Gardens, S.S.

The Honourable the Colonial Secretary
Singapore.

No Minutes should be written on this page. A separate half-sheet to
be used if required.
